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U. S. DEPARTMENT

1955 OUTLOOK ISSUE
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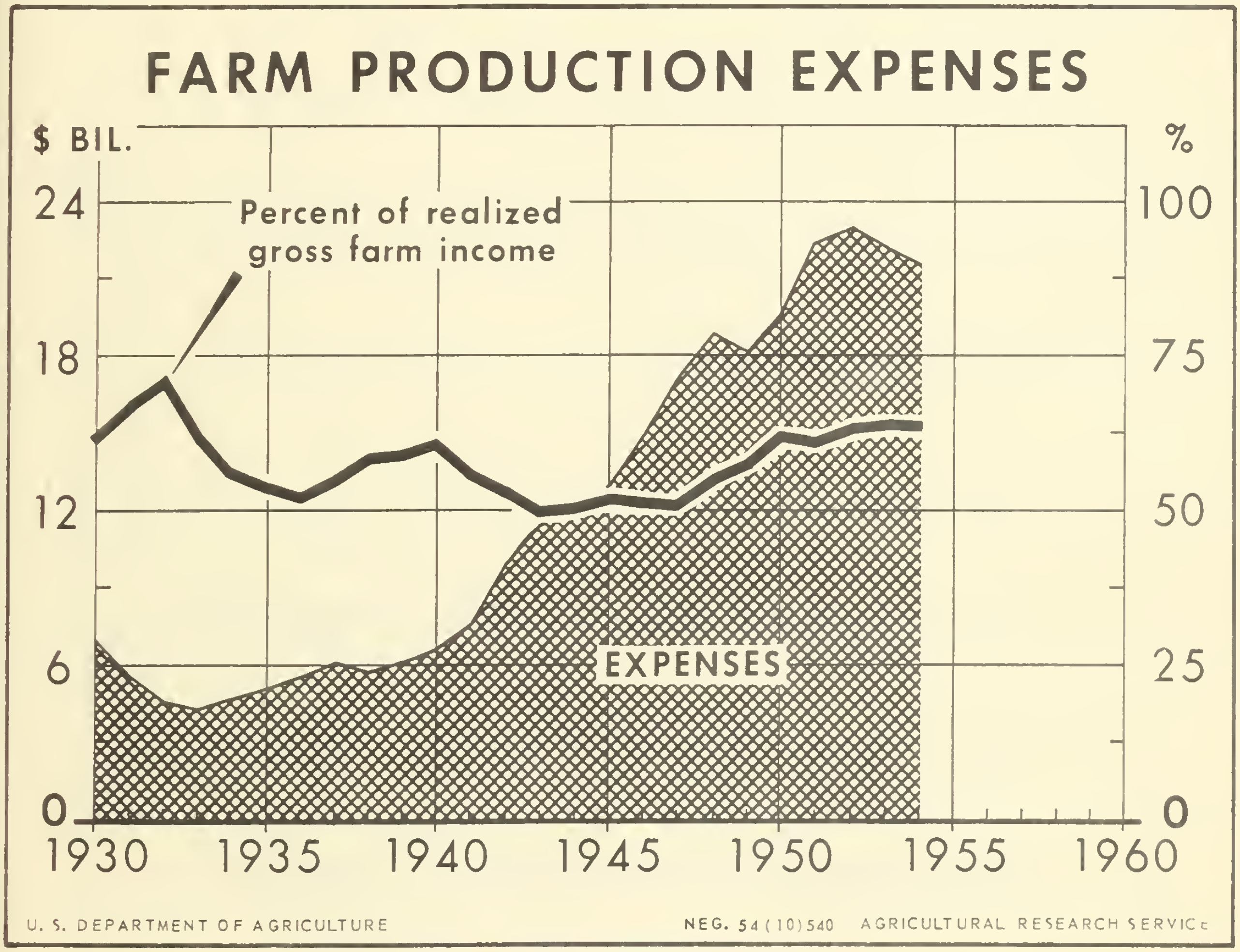
THE FARM COST SITUATION

Production Economics Research Branch
Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE

ARS 43-6 (FCS-17) OCTOBER 1954

FARM PRODUCTION EXPENSES



U. S. DEPARTMENT OF AGRICULTURE NEG. 54 (10) 540 AGRICULTURAL RESEARCH SERVICE

Farm production expenses in the United States increased from about $6 billion in 1939 to a peak of about $23 billion in 1952. Three reasons largely accounted for this increase: (1) Prices increased, (2) farm output expanded, and (3) farmers became more dependent upon industrial products in their farming operations. The decline in farm production expenses since 1952 has been due mainly to reductions in prices paid by farmers for items that are mainly farm-produced, such as livestock, feed and seed. During the last 25 years expenses of farm production have accounted for a fairly high percentage of realized gross income. The percentage was highest in 1932 when prices received for farm products were extremely low. Since 1947 the trend has been upward. In recent years the use of more nonfarm inputs has been an important factor.

Goods and services used in production: Prices paid by farmers and farm wage rates, United States

Index numbers (1935-39 = 100)

Year	Commodities, interest, taxes and wage rates 1/	Commodities only	Feed	Livestock	Motor supplies	Motor vehicles	Farm machinery	Farm supplies	Building and fencing materials	Ferti-lizer	Seed	Wage rates 2/
1910-14	79	80	95	81	---	---	65	71	69	98	84	82
1915-19	118	121	149	123	---	---	85	117	97	141	127	122
1920-24	131	117	133	94	---	---	101	130	116	141	124	149
1925-29	131	116	127	123	127	89	101	123	111	129	123	152
1930-34	101	90	85	71	99	89	95	103	96	106	81	100
1935-39	100	100	100	100	100	100	100	100	100	100	100	100
1940	100	99	95	115	96	101	100	104	101	96	86	107
1941	106	105	103	130	99	107	101	111	108	96	82	125
1942	121	119	126	152	106	116	107	123	118	107	111	163
1943	138	132	149	173	109	121	111	137	123	114	139	217
1944	148	140	165	163	111	131	114	144	131	116	158	263
1945	156	142	164	178	111	135	115	146	134	118	162	297
1946	168	154	190	202	113	139	119	147	146	119	167	320
1947	192	181	225	252	124	161	135	159	191	131	192	346
1948	211	202	238	312	138	181	157	169	212	143	223	365
1949	204	192	196	277	140	199	176	176	210	147	202	354
1950	210	198	200	324	143	199	180	176	215	141	193	351
1951	232	220	225	395	150	212	194	189	239	149	197	388
1952	237	221	239	331	151	222	201	200	240	153	223	416
1953	227	204	216	234	154	221	203	201	241	154	205	424
Aug.	224	200	211	214	---	---	---	---	---	---	---	---
Sept.	223	199	210	210	156	219	204	199	240	154	197	---
Oct.	222	198	206	208	---	---	---	---	---	---	---	426
Nov.	224	200	204	223	---	---	---	---	---	---	---	---
Dec.	225	202	210	223	157	223	204	202	241	---	---	---
1954												
Jan.	230	205	212	251	---	224	---	---	---	---	---	434
Feb.	230	206	214	251	---	---	---	---	---	---	192	---
Mar.	230	206	217	249	158	222	205	198	240	152	192	---
Apr.	229	206	220	253	---	---	---	196	---	151	192	419
May	229	206	222	252	---	---	---	---	---	---	194	---
June	227	203	216	236	156	222	205	194	239	---	---	---
July	224	199	213	210	---	221	---	---	---	---	---	417
Aug.	225	202	215	224	---	---	---	---	---	---	---	---
Sept.	226	202	215	231	---	---	---	---	---	152	190	---

1/ Revised to reflect revisions in interest and tax indexes. 2/ Simple average of quarterly indexes seasonally adjusted.

Note: For a list of items included in this table see "Agricultural Prices," Agricultural Marketing Service, September 30, 1954.

THE FARM COST SITUATION

Approved by Outlook and Situation Board, October 18, 1954

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GENERAL SITUATION

Total farm production expenses in the United States are slightly lower this year than they were in 1953. The 1955 outlook is for some further slight decline in farm production expenses. Nevertheless farm production expenses will be more than three times as high in 1955 as in 1940.

Farm cost rates changed little from 1953 to 1954. Wage rates and prices of seed, fertilizer, and farm supplies were down slightly. Prices of feed and building materials averaged about the same. Those of livestock and motor supplies were a little higher. List prices for farm machinery were up slightly, but frequently somewhat larger discounts and trade-ins were available.

Farm cost rates expected in 1955 relative to 1954 are as follows:

Farm wage rates and interest rates--slightly lower.

Seed, and feeder and replacement livestock--slightly lower.

Motor fuel, building and fencing materials, feed and fertilizer--about the same.

Farm machinery--about the same, discounts remaining substantial.

Taxes per acre, and tires--slightly higher.

Since 1952, when expenses reached their peak, prices of farm-produced expense items such as feed, seed, and livestock have moved down. Interest rates and taxes have increased slightly. Factory-produced cost items have changed little or have moved up. With business conditions at a reasonably high level, there seems little reason to expect significant price declines in industrial items next year.

In 1954, the drought, the drop in acreage of cotton with substitution in many areas of less intensive crops, and, to some extent, the decline in acreage of wheat have tended to reduce total expenditures made for certain items, such as machinery operating costs and marketing charges.

Farm capital expenditures for new machinery and buildings declined materially this year. The 1954 output of farm machinery, for example, was about a third below that of 1951. But the value of machinery and buildings on farms was at an all-time high. Consequently, depreciation costs were about the same as in 1953. Expenditures for other items changed relatively little from 1953 to 1954.

The cash cost of farming has increased substantially in recent years. Farm production expenses of U. S. farm operators will be approximately $4.4 billion or about a fourth higher this year than in 1947 (table 1). The increasing use together with higher prices of goods and services produced off the farm is largely responsible for this increase in total farm production expenses.

Requirements of commercial agriculture are expected to cause total production expenditures to remain high in 1955. Although lower incomes have encouraged and will continue to encourage farmers to watch their expenditures carefully, many who plan to adjust their operations to bring about lower costs over a period of years will need to continue a reasonably high level of investment for the next few years.

Prospective cost changes for the next year are always of interest. But it should be recognized that for most farmers this is frequently not the nub of the question. Farmers who buy machinery, for example, are thinking about the next 5 to 10 years. Decisions concerning the hiring of labor frequently are knit into a production plan which extends over a number of years. These changes in farm plans often lag behind changes in current economic conditions. Consequently, the interest of farmers frequently centers on how cost relationships have changed over a period of years; whether they are likely to change back, and what adjustments to technological developments appear to be desirable.

Relationships among the cost rates of major items used in production have changed considerably since 1935-39. Farm wage rates, for example, have increased by more than 300 percent while fertilizer prices have increased only 50 percent (fig. 1). Most of the changes in relationships between important cost rates took place during World War II. Since 1947 relative changes have been much less significant (fig. 2).

Prospective changes in 1955 are relatively small. While some further adjustments during the next few years may be expected, a return to the prewar cost rate relationships appears unlikely. On balance, trends toward the use of more nonfarm inputs and increased output per farm worker are likely to continue during the next 5 to 10 years (fig. 3).

The particular items of cost that concern farmers, vary greatly by area and type of farm. On wheat-livestock farms in the northern Plains, for example, power and machinery make up nearly two-thirds of total operating expense. Adjustments in use of power and machinery and of diverted acres can materially affect cost per unit of product on many farms.

In the northeastern dairy areas feed accounts for more than a third of the production expenses. Hired labor is important, especially on the larger farms. Cost reduction opportunities on these farms center to a considerable extent around making better use of improved technology in the growing and harvesting of feed and in use of labor.

On Piedmont cotton farms machinery, fertilizer, and hired labor are important cost items. Better use of land taken out of cotton offers opportunity to improve efficiency in the next few years.

In all areas decisions farmers make with respect to farming practices in any one year may affect production costs for a number of years. With increased use of power and machinery and other technologies requiring heavy investments, long-range farm planning becomes more and more important.

Table 1.- Production expenses of farm operators, United States, 1946-54

Year	Machinery, buildings, fertilizer, taxes, interest, and miscellaneous 1/	Hired labor	Feed, seed, and livestock	Total production expenses 2/
	Million dollars	Million dollars	Million dollars	Million dollars
1946	7,473	2,553	4,664	14,690
1947	8,696	2,819	5,676	17,191
1948	9,645	3,029	6,212	18,886
1949	10,112	2,855	5,179	18,146
1950	10,971	2,724	5,975	19,670
1951	12,366	2,920	7,084	22,370
1952 3/	13,123	2,996	7,064	23,183
1953	13,303	3,052	5,775	22,130
1954 4/	12,700	3,000	5,900	21,600

1/ Depreciation rather than the amount invested is used in determining machinery and building expenses.
2/ Excluding Government payments to nonfarm landlords.
3/ Revised.
4/ Tentative estimates.

Agricultural Marketing Service.

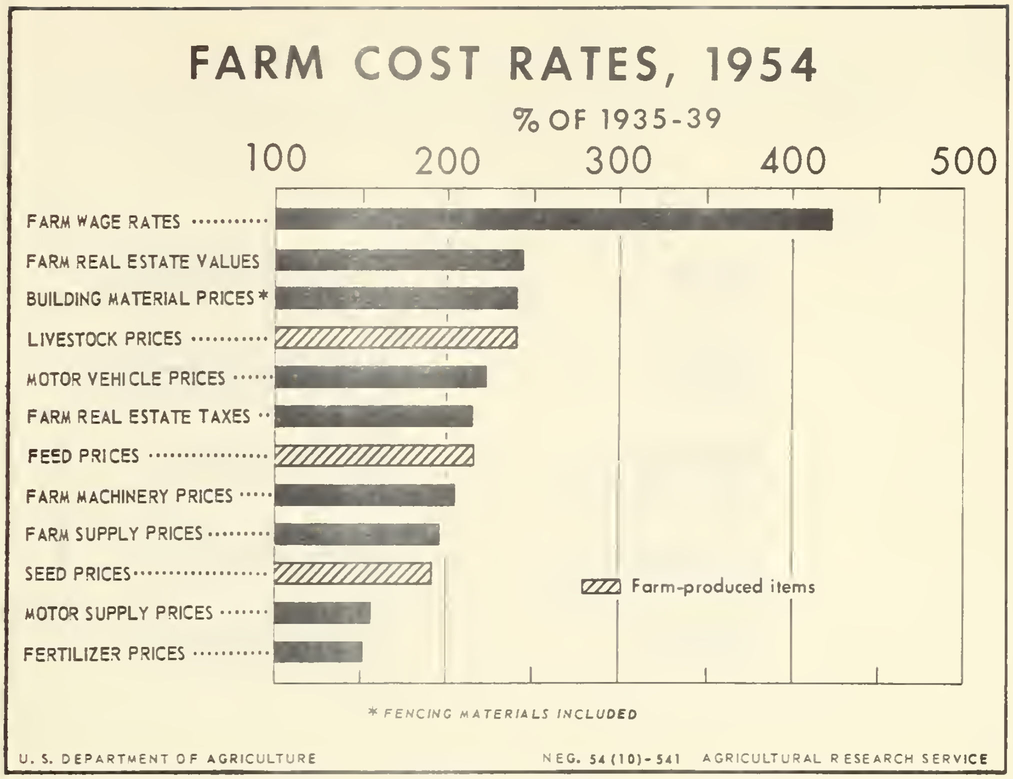

Figure 1

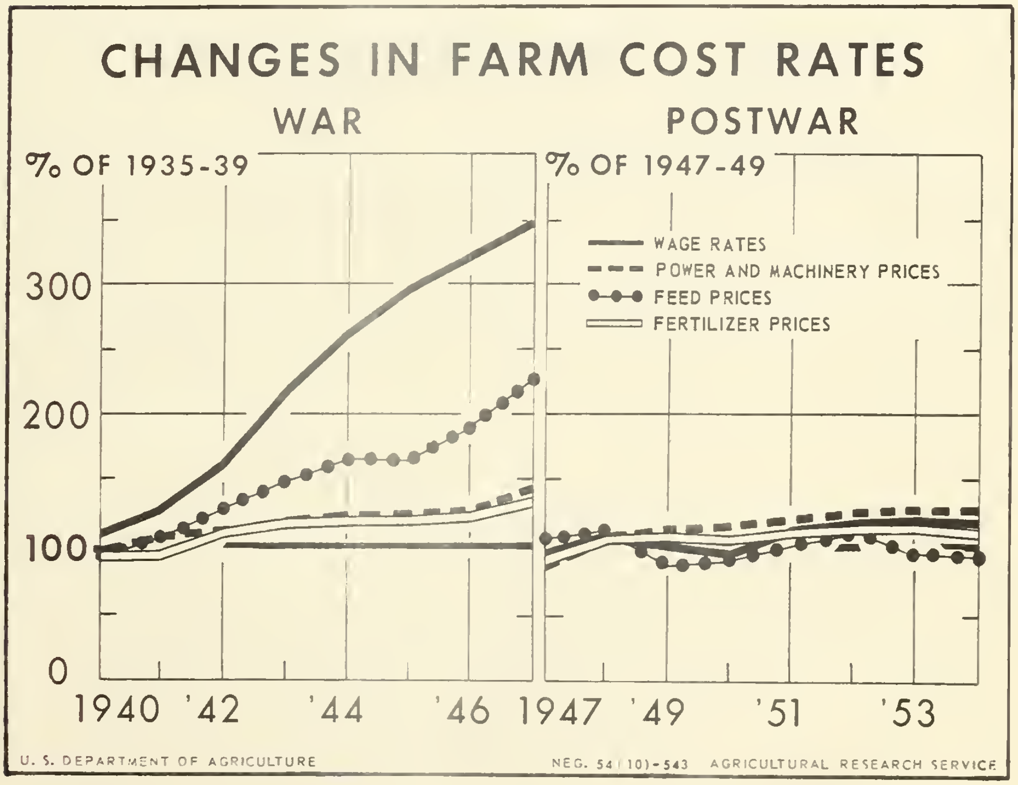

Figure 2

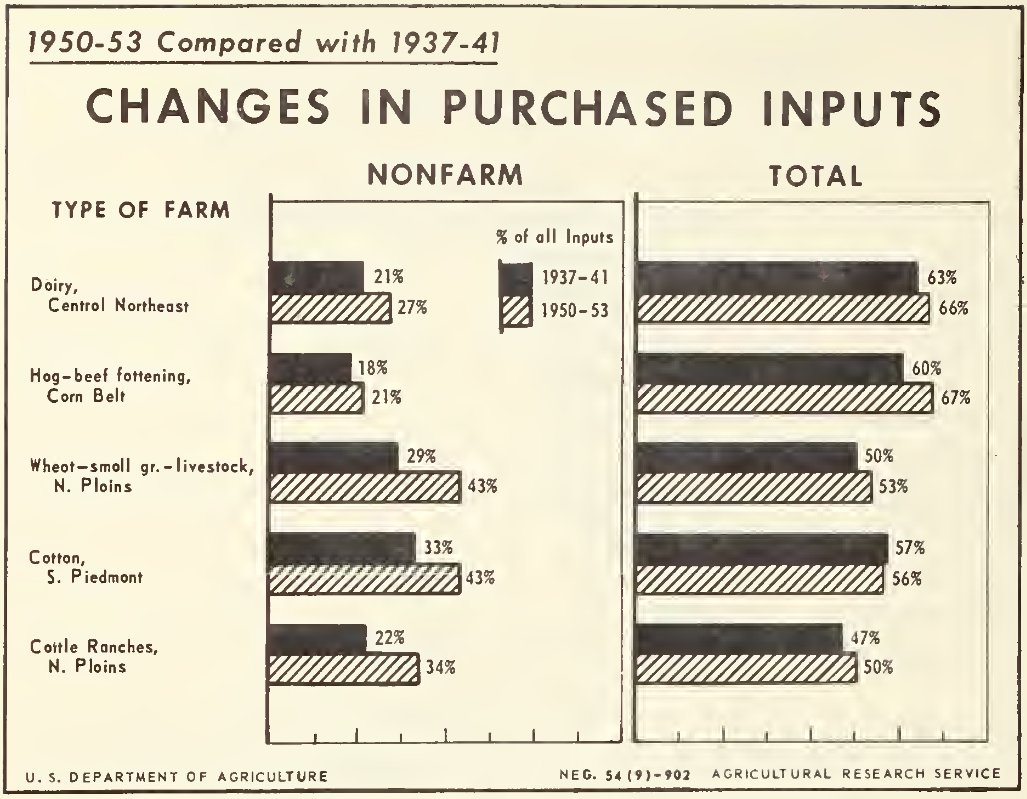

Figure 3

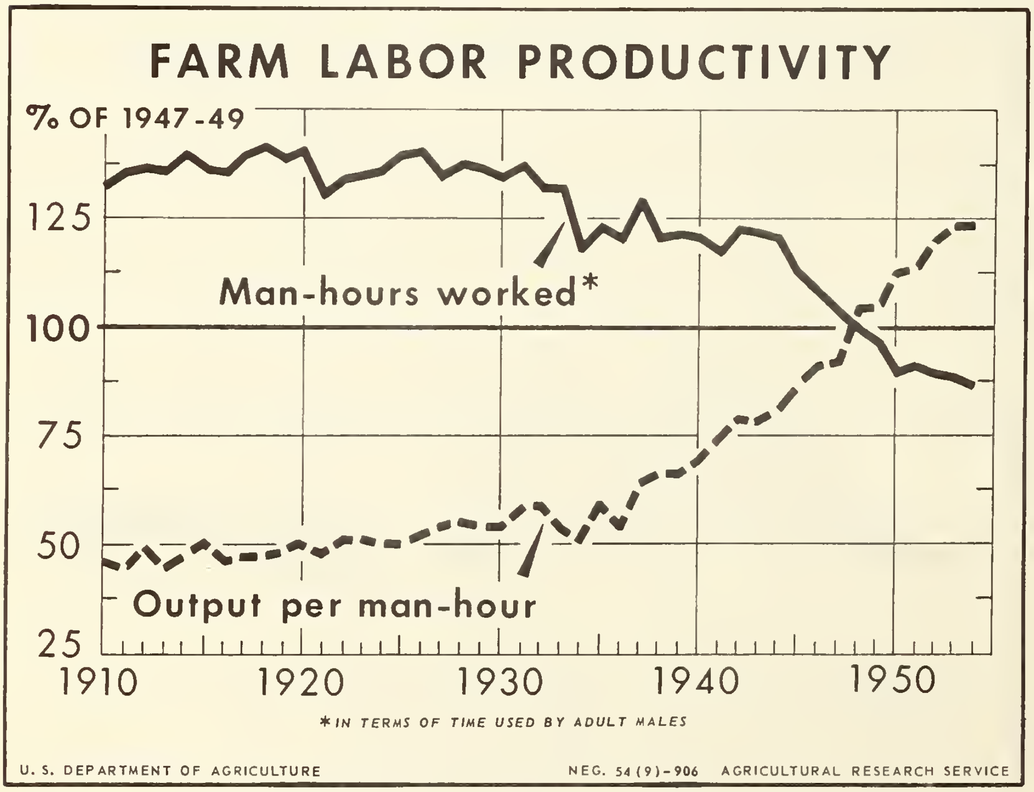

Figure 4

Farm Labor

Farm wage rates have eased off in recent months (table 2). This has occurred particularly in the South and West. The easier farm labor supply may well continue into 1955. Farm wage rates will probably average slightly less in 1955 than in 1954.

Despite the recent decrease, farm wage rates continue to be higher than cost rates of other farm inputs compared with relationships before World War II. Adjustments on farms that will reduce the amount of labor, per unit of product generally will continue to be profitable. For example, many commercial orchardists who have not already done so might well consider using one of the newer chemical sprays for thinning apples. This will reduce costs of thinning. Additional mechanization of certain farm operations will pare costs per unit over a period of years. In cutting costs, however, each farm is unique in some respect and each adjustment must be considered on an individual farm basis.

The 1954 amendments to the Social Security Act go into effect on January 1, 1955. The new Act extends Old Age and Survivors Insurance to practically all hired farm workers who are paid as much as $100 cash in a year by any one farmer. Under the old law only regularly employed farm workers were covered. The tax rate remains at 2 percent each for employee and employer. In other words, the farmer keeps back 2 percent of the covered hired worker's wages and adds another 2 percent as his share of the tax. The new law also raises the maximum earnings on which the tax is paid from $3,600 to $4,200 a year.

The supply of farm workers generally has been adequate this year to enable farmers to get their work done well and on time. By the middle of September, almost 30 percent of the current cotton crop had been ginned, compared with 18 percent on the same date last year. The advanced progress of cotton picking was affected by the short crop resulting from fewer acres and from lower yields outside the irrigated areas. Droughts were responsible for the drop in yield and the earlier-than-usual maturity. Corn and wheat crops also took fewer man-hours this year and only partly offsetting were the greater labor needs for most other farm enterprises. Consequently, estimated man-hours for all farm work in 1954 are around a half billion, or about 2 percent,less than last year. Preliminary estimates of farm output in 1954 indicate a decrease of about the same proportion, which means that average productivity of farm labor did not improve this year in contrast to most recent years (fig. 4). The total number of farm workers is also down slightly.

Supplies of workers available for farm work next year are expected to continue generally adequate. However, the supply of experienced year-round workers probably will remain tight. With a continuation of some industrial unemployment, the movement of farm workers to industry is not expected to increase. Workers from Puerto Rico are expected to be available and others from Mexico and British West Indies probably will be available if the supply of domestic workers is not adequate. Shifts in acreages of crops next year resulting from allotments, marketing quotas, and other causes in most areas will be to crops and uses that take less labor. This adds assurance that labor stringency will not hinder farm production.

Table 2.- Labor used on farms, labor productivity, wage rates and related data, United States, 1940-54 1/

Index numbers (1947-49=100)

Period or year	Farm employment			Man-hours of farm work 3/	Farm output 4/	Farm output per man-hour	Gross farm income per man-hour 5/	Farm wage rates 6/
	Total 2/	Family 2/	Hired					
1940	107	104	117	120	83	69	28	30
1941	104	101	116	117	86	74	35	35
1942	103	100	112	122	96	79	46	46
1943	102	101	107	121	94	78	56	61
1944	100	100	98	120	97	81	60	74
1945	98	99	93	112	96	86	68	83
1946	101	102	96	108	98	91	81	90
1947	102	102	99	103	95	92	99	97
1948	101	101	102	100	104	104	103	103
1949	97	97	99	97	101	104	98	100
1950	91	91	91	89	100	112	108	99
1951	88	88	87	91	103	113	122	109
1952	85	85	84	89	107	120	122	117
1953	84	84	85	88	108	123	119	119
1954 7/	83	82	86	86	106	123	119	118

1/ Data on farm employment, wage rates, and farm income are from Agricultural Marketing Service.

2/ Includes farm operators and members of their families working without wages.

3/ Total man-hours of farm work in terms of the time required by average adult male workers.

4/ Net calendar-year production for eventual human use.

5/ Because of the increase in volume of output and the increase in the price of farm products, gross farm income per man-hour has increased at about the same rate as have farm wage rates.

6/ Simple average of seasonally adjusted quarterly indexes.

7/ Preliminary. Estimates of farm output and man-hours for 1954 based on August and September, 1954 "Crop Production" reports and other releases of the Agricultural Estimates Division, Agricultural Marketing Service.

Farm Power and Machinery

Prices of farm machinery and equipment, excluding automobiles and motortrucks, are about the same as they were on January 1, 1951, and they are expected to continue at about present levels throughout 1955. They are now about double the 1935-39 average prices and about 14 percent above prices prevailing in June 1950, the beginning of the Korean War.

Although retail prices quoted by farm machinery and equipment dealers have changed little since January 1951, many dealers have made price concessions especially in the form of increased allowances for trade-ins. The most liberal discounts have been offered in areas where farm incomes have been low because of drought or other reasons and where inventories in dealers' hands have been unusually high.

Substantial discounts may continue to be offered in 1955 but they may be somewhat smaller in some instances. Farmers' expenditures for new machinery in 1955 will continue to be less than in 1951-53 but output of farm machinery also is expected to be considerably below the level of those years.

Production of farm machinery and equipment was of record volume in 1951, but it has since declined. The 1954 output probably will be about a third below that of 1951. Production in the current year will be small only in relation to the high output of recent years. It will be substantially above the average of the prewar period. With the prospective farm incomes of 1955 it appears likely that farmers will buy about as much farm machinery in 1955 as they bought in 1954.

Although purchases of machinery and equipment by farmers have declined since 1951, they have been in excess of numbers discarded. Numbers of tractors and other important machines on farms continue to increase. Since 1940 numbers of tractors on farms have about tripled. From 1940 to 1954 the annual increase in tractor numbers has approximated 218,000. This is about the same as the yearly increase since January 1, 1952.

Preliminary estimates indicate a total of 2,650,000 motortrucks on farms January 1, 1954. This is about 150 percent above the 1940 number. Numbers of farm automobiles on January 1, 1954, are tentatively estimated at 4,450,000. From 1930 to 1940 numbers of farm automobiles changed very little. Since 1940, they have increased only about 8 percent but during that period there were large reductions in the numbers of farms and farm families.

Retail prices of gasoline in 1954 are higher than for any previous year but they are only about 45 percent above the 1935-39 prices (table 3). Little, if any, change in these prices is expected in the coming year.

Prices of tires in 1954 were moderately below the high 1951 and 1952 prices but they may increase moderately in the near future.

Table 3.- Horses and mules and tractors on farms and cost of keeping horses and mules and of using farm tractors, United States, 1935-39 average and 1940-54 1/ 2/

(Index numbers 1935-39=100)

Calendar year or period	Tractors on farms, January 1	Horses and mules on farms, all ages January 1	Colts under 1 year on farms January 1	Horses and mules all ages, value per head January 1	Feed cost per head 3/	Prices paid by farmers for: New tractors 4/	Prices paid by farmers for: Gasoline	Prices paid by farmers for: Tires 6.00 x 16
1935-39	100	100	100	100	100	100	100	100
1940	124	92	101	90	89	96	95	92
1941	135	90	98	81	95	101	99	95
1942	152	87	85	78	119	102	103	117
1943	169	84	69	95	154	99	103	130
1944	178	80	62	98	178	111	103	136
1945	195	76	54	86	176	113	103	131
1946	206	71	42	80	196	126	106	133
1947	220	64	35	84	236	142	118	127
1948	240	59	31	79	244	158	131	128
1949	266	54	28	72	188	174	134	124
1950	290	49	23	63	196	175	135	139
1951	317	45	19	56	221	189	136	165
1952	335	40	16	55	231	187	139	158
1953	354	35	15	54	207	183	143	155
1954	5/ 370	32	14	54	6/ 207	7/ 185	7/ 146	7/ 156

1/ Numbers and value per head of horses and mules and prices paid by farmers are from Agricultural Marketing Service reports.

2/ The 1935-39 averages were: Horses and mules all ages, 15,750,000 head; value per head, $97.65; feed cost per head, $48.15; colts under one year of age 744,000 head; tractors, 1,244,000; prices paid by farmers for new tractors, $1,060; gasoline $0.19; and tires, $12.60

3/ Based on 25 bushels each of oats and corn and 2 tons of baled hay.

4/ Tractor prices are for medium size (20-29 BHP) wheel tractor equipped with rubber tires.

5/ Preliminary estimates.

6/ Average of the first 8 months.

7/ Average prices paid in March and June.

Horses and Mules

Demand for horses and mules has declined for many years and current prices are only slightly more than half of the average prewar prices. With the low prices there have been consistent and large declines in the size of the colt crop.

Cost Reduction Possibilities

Farm machinery expenses account for a large part of all production expenses on most farms. On spring wheat farms in the northern Plains, for example, machinery expenses accounted for 68 percent of total operating expenses in 1953 (table 4). Farm machinery represents about 40 percent of all farm production expenses in the country.

Table 4.- Machinery expenses, selected types of farms, 1953

Cost item	Type of farm		
	Cash grain, Corn Belt	Wheat-small grain-livestock, northern Plains	Cotton, southern Piedmont
	Dollars	Dollars	Dollars
Total farm operating expenses 1/	6,335	5,267	2/ 2,025
Machinery depreciation	1,345	1,283	170
Other machinery expense	1,368	2,293	508
Total machinery expense	2,713	3,576	678
Machinery expense as percentage of total farm operating expense	43	68	33
Machinery purchased 3/	1,514	1,142	190

1/ Includes all cash expenditures for operating the farm and depreciation.

2/ Also includes value of perquisites to croppers.

3/ Machinery purchases adjusted for change in inventory equals depreciation.

A farmer who contemplates buying machinery in 1955 whether for replacement or addition probably is in one of three groups: (1) He may buy a particular machine for convenience; (2) he may buy the machine to be equipped for emergencies as well as for normal operations, although under ordinary circumstances he could not expect to reduce his costs or increase his income by owning it; (3) he may buy the machine to reduce his costs or to increase his net income under normal operating conditions.

In any of these situations he may have ample reasons for buying farm machinery. But in the first instance, costs, or increased net income, is not a primary factor. In the second situation, the risk involved and the cost of reducing it must be considered.

Opportunities for reducing costs and increasing net income over a period of years by use of additional machinery frequently exist on farms where hired labor provides a large part of the labor force or where hired labor accounts for a large part of the operating expenses. Also, opportunities frequently arise in the enlarging of farms when it would be necessary to hire more labor if no additional machinery were bought.

As indicated in figure 2, from 1940 to 1946 wage rates rose much faster than did prices of machinery. Since that time the relationship has not changed appreciably. On some farms operators have already adjusted to the current relationship between wage rates and machinery prices, and have little opportunity further to reduce costs by using more machinery. On other farms labor costs per acre and per unit of production are still high.

For some farms in this latter group, machines may not be available to perform jobs now done with manual labor. Operators of some other farms have adjusted to the high cost of hired labor by holding down or reducing the size of their operations to a point at which most of the labor can be performed by the operator and his family.

On other farms with relatively high labor costs operators are either not aware of the opportunities for cost reduction through use of more machinery or they lack the necessary capital to make the adjustment. Operators of small farms may find opportunities to reduce costs by buying used or rebuilt machines that will perform satisfactory service on small acreages.

Feed

Prices of feed in September generally were close to those of last February and about 2 percent above those of a year ago (table 5). Exceptions are soybean meal, cottonseed meal and meat scrap, which were 15 to 20 percent above those of a year ago and 10 to 15 percent above those of February 1954. September prices of alfalfa hay were 70 cents a ton higher than a year earlier. The general level of feed prices in the 1954-55 feeding season is expected to average about the same as in the 1953-54 season. Cottonseed meal may average higher and soybean meal lower than a year earlier.

Total supplies of feed concentrates for the 1954-55 season are about 4 percent larger than a year ago (table 6). Most of the increase in the supply results from the larger carryover of feed grains under loan or owned by the Commodity Credit Corporation. The corn crop is smaller than last year, but other feed grains more than make up for it. The supply

Table 5.- Average prices of feeds in the United States, September 15, 1954 with comparisons

Item	Unit	Sept. 15, 1952	Sept. 15, 1953	Feb. 15, 1954	Sept. 15, 1954
		Dollars	Dollars	Dollars	Dollars
Prices received by farmers					
Corn	Bushel	1.71	1.50	1.43	1.53
Oats	do.	.84	.71	.78	.71
Barley	do.	1.43	1.12	1.15	1.05
Sorghum grain	Cwt.	3.02	2.26	2.32	2.16
Hay, baled	Ton	25.00	20.90	23.70	22.00
Feed grains and hay, Index number (1935-39=100)		246	216	217	219
Prices paid by farmers					
Mixed dairy feed 16%	Cwt.	4.37	3.90	3.99	3.82
Laying mash	do.	5.35	4.80	4.86	4.90
Broiler mash	do.	---	5.22	5.26	5.33
Cottonseed meal	do.	5.33	3.72	4.02	4.45
Soybean meal	do.	6.08	4.60	5.01	5.52
Linseed meal	do.	5.43	4.60	4.91	4.61
Meat scrap	do.	6.73	5.37	5.43	6.18
Bran	do.	3.77	3.11	3.27	3.01
Middlings	do.	3.96	3.26	3.33	3.18
Alfalfa hay, baled	Ton	37.60	33.60	35.90	34.30
Prices paid by farmers for feed, Index number (1935-39=100)		242	210	214	215
Average value of concentrate ration fed to poultry and milk cows [1]					
Fed to poultry	Cwt.	4.28	3.82	3.86	3.89
Fed to milk cows in milk-selling areas	Cwt.	3.88	3.39	3.44	3.35
Fed to milk cows in cream-selling areas	Cwt.	3.40	2.98	3.06	2.98

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[1] Value of the corn, oats, oilmeal, millfeed, commercial mixed feed, etc., making up 100 pounds of "grain" ration.

Agricultural Marketing Service.

Table 6.- Feed concentrates, supply and utilization, and livestock fed, United States, 1937-54 1/

Year beginning October	Supply				Utilization		Stocks of feed grains end of year 2/	Animal units grain-consuming livestock fed annually	Production feed grains per animal unit	Supply concentrates per animal unit	Concentrates fed per animal unit
	Stocks, feed grains beginning of year	Production, feed grains	Wheat, rye and by-proudct feeds fed	Total	Seed, feed, industry and exports of feed grains	Concentrates fed to livestock					
	Million tons	Million tons	Million tons	Million tons	Million tons	Million tons	Million tons	Million units	Tons	Tons	Tons
Av. 1937-41	16.9	99.3	19.9	136.1	12.1	104.9	19.9	153.1	0.65	0.89	0.69
Av. 1942-46	14.7	117.3	29.4	161.4	14.8	133.0	13.5	177.5	.66	.91	.75
1947	13.8	94.1	24.7	132.6	13.6	110.4	7.8	154.0	.61	.86	.72
1948	7.8	135.4	23.5	166.7	17.6	120.1	30.4	160.1	.85	1.04	.75
1949	30.4	120.6	25.2	176.2	17.2	127.3	30.6	166.1	.73	1.06	.77
1950	30.6	122.0	26.0	178.6	20.4	129.8	28.7	172.3	.71	1.04	.75
1951	28.7	112.9	27.0	168.6	17.1	131.6	20.2	174.2	.65	.97	.76
1952	20.2	119.7	27.9	167.8	17.0	122.7	27.0	170.4	.70	.98	.72
1953	27.0	117.2	27.7	171.9	16.0	126.0	31.0	168.1	.70	1.02	.75
1954 3/	31.0	119.6	27.4	178.0	17.0	131.0	30.0	174.0	.69	1.02	.75

1/ From Feed Statistics, page 2, January 1954, AMS, and Feed Situation, August 1954, table 2.

2/ Stocks do not necessarily exactly equal supply less feed and other utilization because of a difference in the crop year for different feed grains.

3/ Preliminary.

of oilseed meals will be about 4 percent larger than a year ago. The quantity of cottonseed meal for feed will probably be down nearly a fourth because of the smaller cotton crop. Soybean meal fed in 1954-55 may be about a fifth larger than last year because of the much larger soybean crop. The only other large change in the supply of high-protein feed for the year ahead compared with the preceding year is that the large quantity of dried milk from Government stocks sold to the feed industry last year probably will not be available this year. In 1954 the supply of high-protein feed was increased by the release of 573 million pounds of dried milk from Government stocks.

The number of animals to be fed in the year beginning October 1 is expected to be up about 3 to 4 percent. Thus the supply of all concentrates per animal unit will be up about one percent and the carryover of feed grains at the end of the year will be nearly as large as this year. The quantity of high-protein feeds (oilmeal equivalent basis) to be fed per animal unit is expected to be down about 3 to 4 percent. The expected increase of about 10 percent in numbers of hogs accounts for most of the expected increase in livestock to be fed in 1954-55 although there will be some increase in poultry.

The supply of hay per animal unit for the country as a whole is slightly larger than last year. In a fourth of the States production of hay in 1954 was 15 percent or more below average and in several southern States it was a third or more below average. Poor to extremely poor pasture prevailed over much of the country south of a line drawn from New Jersey to Wyoming, including the southern Corn Belt. Thus the increased cost of carrying livestock through the winter may be a problem on many farms in this area. In some places corn that is not worth picking is making 2 to 3 tons of silage per acre or the equivalent in dry fodder. This will help to get the cattle through the winter but there will be little new corn for feeding to hogs or to cattle that ordinarily would be fattened. It will be necessary to ship larger quantities of hay and concentrates into drought areas in some southern States.

In September 1954 returns per $1.00 of feed were below those of a year ago for each class of livestock and poultry except sheep, and all were below the 15-year average, 1937-51 (table 7). All prices of livestock and poultry were below those of a year ago except for beef cattle, calves, and lambs. The sharpest declines since last February were in eggs and hogs. Returns per $1.00 of feed in September were lowest for eggs, turkeys, milk, and butterfat since this series was started in 1937. However, cattle feeding in 1953-54 gave returns 17 percent above average. Prices of feeder cattle are higher than a year ago and returns for the 1954-55 season probably will not be as high as in the preceding season.

Low returns from several livestock and poultry enterprises present a serious problem for farmers who buy most of their feed. On some farms it may be possible to reduce costs by changing feeding practices, or by reducing labor. Changes in building arrangements may reduce costs materially over a period of years.

Table 7.- Returns per $1.00 of feed cost of livestock enterprises United States, Sept. 15, 1954, with comparisons 1/

Livestock enterprise or product	1937-51 average Sept.	Sept. 15, 1951	Sept. 15, 1952	Sept. 15, 1953	Feb. 15, 1954 4/	Sept. 15, 1954
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Eggs	1.91	1.97	1.62	1.93	1.69	1.24
Broilers	2/ 1.64	---	---	1.61	1.32	1.35
Milk	2.17	2.08	2.00	2.03	1.81	1.85
Butterfat	1.71	1.56	1.52	1.45	1.35	1.21
Hogs	1.65	1.49	1.50	1.96	2.16	1.57
Sheep raising	1.70	2.05	1.44	1.39	1.32	1.40
Beef raising	1.83	2.58	1.92	1.47	1.42	1.44
Cattle		1951-52	1952-53	1953-54		
feeding	3/ 1.25	1.33	.72	1.46		
	Index numbers (1937-51=100)					
Eggs	100	103	85	101	113	65
Broilers	100	---	---	98	80	82
Milk	100	96	92	94	94	85
Butterfat	100	91	89	85	88	71
Hogs	100	90	91	119	129	95
Sheep raising	100	121	85	82	82	82
Beef raising	100	141	105	80	81	79
Cattle		1951-52	1952-53	1953-54		
feeding	3/100	106	58	117		

1/ The following quantities of feed were used in calculating feed cost: 7 pounds of poultry ration per dozen eggs; 4½ pounds of chick starter per pound of broiler in 1935-39. In 1951 and 1952, 3½ pounds of chick starter and since 1952, 3¼ pounds of broiler mash. No prices available on broiler mash before 1953. 7½ bushels of corn plus 20 pounds of soybean meal per 100 pounds of hogs; 30 pounds of concentrate ration fed to milk cows in milk-selling areas plus the value of 110 pounds of hay, per 100 pounds of milk; 7½ pounds of concentrate ration fed to milk cows in cream-selling areas plus the value of 27.5 pounds of hay in Minnesota and Iowa, per pound of butterfat; 3 bushels of corn plus 600 pounds of hay per 100 pounds of beef cattle; 2 bushels of corn plus 1,500 pounds of hay per 100 pounds of sheep and lambs. It was assumed that for each 100 pounds of sheep and lamb produced, 20 pounds of wool were produced from the same feed. The quantity of hay for milk cows, beef cattle, and sheep includes an allowance for silage and pasture. It was assumed that the feed nutrients from pasture would cost 1/4 as much per pound as they would if obtained from hay. Cattle feeding returns are based on table 1, Livestock and Meat Situation, Aug.-Sept., 1954. It was designed to represent average feeding experience in the Corn Belt.

2/ Average for March.

3/ 1920-52 average.

4/ Index numbers for February are based on 1937-51 averages for February.

Seeds

The index of prices paid by farmers for seeds was about 6 percent lower in 1954 than in 1953. In the spring of 1954 prices paid for 25 of 33 kinds of seeds for which data are available were below a year earlier. Prices of seed potatoes and Ladino clover declined considerably while prices of Kentucky bluegrass and redtop increased substantially.

In general, a slight decline in prices of all seeds is expected in 1955. However, changes in prices of individual seeds will differ widely depending upon the supply of the particular seed. Seed potatoes are expected to be considerably higher next year.

Prices paid by farmers for two-thirds of the grass and legume seeds are higher this fall than they were last spring. Greatest advances have occurred in prices of orchardgrass, timothy, white clover, and improved varieties of alfalfa seed. Prices of alsike, Ladino and red clover, Grimm and common alfalfa, and crested wheatgrass are also higher than last spring. Sharpest declines have occurred in Kentucky bluegrass and common ryegrass, with smaller declines reported for hairy vetch, smooth brome, and redtop.

Compared with prices of grass and legume seeds in the fall of 1953, current retail prices of 13 are higher and 12 are lower. Greatest advances over last fall are reported for sweet and blue lupine, orchardgrass, white clover, common crimson clover, timothy, redtop, and perennial ryegrass. Sharpest declines from last fall occurred with Ladino and alsike clover, smooth brome, purple vetch, and wild winter peas.

Total supply (production plus carryover) of 23 grass and legume seeds for which production forecasts have been made is about a sixth below that of last year and a tenth below the 1943-52 average. Current supply of cloverseed, exclusive of crimson clover which is sown mostly in the fall along with other winter cover-crop seeds, is about a sixth smaller than last year and about 5 percent below average. The supply of grass seeds, except common and perennial ryegrass included in the winter cover-crop group, is slightly smaller than last year and about 6 percent below average. The supply of winter cover-crop seeds is nearly a fifth smaller than last year and a sixth below average.

Seeds in shortest supply, compared with the 10-year average, are redtop, Austrian Winter peas, timothy, common vetch, lupine, crested wheatgrass, and Kentucky bluegrass. But supplies of the last two--crested wheatgrass and Kentucky bluegrass--are larger than a year ago. Supplies of fescues, ryegrasses, Ladino clover, hairy vetch, and smooth brome are much above average.

Fertilizer

Farmers are expected to use a little more commercial fertilizer in terms of plant nutrients next year than they used this year. They used more in 1954 than they had ever used before. Prices of fertilizer are likely to remain unchanged, and supplies of all plant nutrients are expected to be adequate to meet anticipated demands. More of the specialized equipment used in applying anhydrous ammonia will be available.

Prices of fertilizer have increased about 8 percent since 1950 and about 58 percent since 1940. But these increases have been small compared with increases in most other prices. Prices of fertilizer currently are lower than they were in 1940 relative to other prices paid as well as to prices received. These changes in price relationships have been partly responsible for the nearly fourfold increase in consumption of fertilizer since 1940.

The aggregate available supply of the three primary plant nutrients has reached a new high each year since 1938-39. In 1953-54 total deliveries of the three primary plant nutrients was 6.215 million tons compared with 5.957 million tons in the previous year. The increased supply in 1953-54 was absorbed by consuming channels with less apparent carryover than for the previous year.

It is estimated that the aggregate 1954-55 supply of the three primary plant nutrients will exceed the 1953-54 supply by about 5 percent. The supply should be ample to satisfy expected demands.

Nitrogen (N): The supply of Nitrogen (N) available for fertilizer purposes in 1954-55 is currently estimated at approximately 2.2 million tons. This estimate is based on current rate of production, plant capacity, and storage facilities, and assuming an import-export balance at about the 1953-54 level. The estimated 2.2 million tons for 1954-55 represent an increase of about 8.9 percent over the 2 million tons reported for 1953-54. The supply of solid Nitrogen materials (dry Nitrogen) available for 1954-55 probably will comprise approximately 55 percent and solutions and liquid materials (wet Nitrogen) about 45 percent of the total supply, compared to 57 percent and 43 percent respectively for the previous year.

Phosphates (P_2O_5): The 1954-55 supply of available phosphoric oxide (P_2O_5) is expected to be about 2.35 million tons, the same as in 1953-54. This estimate is based on current rate of production, trends in consumption in recent years, and an assumption that the import-export balance will be about the same as in 1953-54. The industry has the capacity to produce a considerably larger tonnage in 1954-55 if demand warrants.

Potash (K_2O): The 1954-55 supply of potash available for fertilizer in terms of Potassium Oxide (K_2O) is estimated at 1.97 million tons. This represents an increase of approximately 7.6 percent over the 1.83 million tons available in 1953-54. This estimate reflects present rate of production, trends in use, and probable demand in 1954-55. Plant capacity is adequate.

Rates of Application

During the last 3 years, farm prices have declined relative to prices of fertilizer. But the relationship is still more favorable than before World War II. Many farms have not yet fully adjusted to the new price relationships and developments in the use of fertilizer. Recent increases in use of fertilizer have been particularly important for hay, pasture, and other feed crops.

From the viewpoint of individual farmers, a major problem with respect to use of fertilizer is the prospective net returns from various levels of application. For agriculture as a whole, effects on output and the nature of prospective demand deserve consideration. Increased use of fertilizer on crops now under control programs would tend to increase yield and could accentuate control problems.

Increased use of fertilizer on hay, pasture, and feed grains when grown in rotation can build up fertility levels and reduce costs of all crop production in future years. Furthermore, an increased output of hay and pasture in 1955 is badly needed in areas experiencing drought in 1954. And more hay and pasture would not directly accentuate the surplus problems that may exist for some of the major cash crops.

Although the most profitable rate of fertilizer application will vary widely, depending on the crop, soil conditions, and price relationships, a general approach to determining the amounts to apply can be used. This approach is illustrated in table 8.

Data presented in table 8 are based on experiments and estimates relating to Corn Belt soils of below average fertility. The use of fertilizer on most Corn Belt soils would not increase the yield of corn as much as is indicated by the estimates presented in table 8.

The most profitable quantity of fertilizer to apply depends on the price of fertilizer and the price of corn as well as the fertility of the soil in question. The appropriate price of corn for such comparisons is the price of corn at the farm less the cost of harvesting. A value of $1.20 a bushel is used here for illustrative purposes. Application of 6 units represents just a little more than the most profitable rate. Returns over fertilizer costs have just begun to decline. Also, returns per dollar spent for fertilizer at that point have fallen until they are just below $1.00, and the cost per *additional* bushel has risen to a fraction above the specified price per bushel, which is $1.20.

If additional yields up to the most profitable rate are summed, the total increase is found to be almost 80 bushels. But other factors must be taken into account. One of these is weather risk. With application of 6 units as the "break even" point the farmer might prefer a somewhat lower rate because other factors may enter in. If, for example, he chose to apply 5 units the sacrifice in additional net return would be

Table 8.- Additional yields of corn, additional returns at $1.20 a bushel, 1/ additional costs and returns per dollar spent for fertilizer at different rates of application

Fertilizer applied 2/		Additional					
Total units (1)	Additional units (2)	Yield per acre (3)	Gross return per acre (4)	Fertilizer cost per acre (5)	Return over cost per acre (Col. 4 - Col. 5) (6)	Cost per bushel (Col. 5 ÷ Col. 3) (7)	Return per additional dollar cost (Col. 4 ÷ Col. 5) (8)
Number	Number	Bushels	Dollars	Dollars	Dollars	Dollars	Dollars
0	---	---	---	---	---	---	---
1	1.00	19.29	23.17	5.92	17.25	0.31	3.91
2	1.00	17.84	21.41	6.55	14.86	.37	3.27
3	1.00	15.12	18.14	7.38	10.76	.49	2.16
4	1.00	11.90	14.28	7.32	6.96	.62	1.95
5	1.00	9.06	10.87	7.36	3.51	.81	1.48
5½	.50	3.61	4.34	3.66	.68	1.01	1.19
5 3/4	.25	1.61	1.93	1.84	.09	1.14	1.05
6	.25	1.49	1.79	1.81	3/ -.02	3/ 1.21	3/ .99

1/ This price is the assumed value of the corn in the field before harvesting.

2/ Each whole unit consists of 20 pounds of P_2O_5 together with the quantities of N and K_2O that are most profitably used with it, based on the relative cost of the three nutrients. Thus, the cost of each additional whole unit, (Col. 5) varies slightly, particularly between the first two units as no K_2O is included in the first unit.

3/ Application of 6 units is a little past the "break-even" point with corn at $1.20. The application at this point is about 325 pounds of N, P_2O_5 and K_2O.

small as compared with returns from using the estimated most profitable rate. Information as to the "break even" point is important as a starting point in evaluating other risks.

In many situations a farmer may want to consider a different allocation of his expenditures for fertilizer as compared with his past practice. In the interest of reduced cost and increased returns over a period of 3 to 4 years, consideration might be given to using more fertilizer on acres diverted to hay and pasture. Decisions in this matter can be based on information of the kind given in table 8 for each crop considered.

Building Materials and Farm Supplies

No change of any consequence has taken place in prices of building materials since 1951 and little, if any, change is expected in the next 12 months (fig. 5). Prices of lumber softened earlier this year but strengthened in the third quarter when construction activity picked up and northwestern lumber workers went out on strike. Housing starts were 19 percent higher in August 1954 than in August 1953.

Farmers who contemplate new construction or remodeling face some difficult decisions. They find (1) that it would cost about 4 times as much to replace many farm buildings as it cost to build them originally; (2) that building costs are not expected to return to anything like prewar levels in the near future; and (3) that many conventional buildings are not well-designed from the standpoint of making most effective use of labor-saving machinery and equipment. This is an important consideration because farm wage rates have increased four or fivefold since most of our conventional farm buildings were built.

A complete overhauling of dairy buildings may be the answer for many dairy farmers. Research workers are beginning to look at the problem from several angles and are coming up with some interesting answers. One group of engineers, economists, and dairy specialists found that one-story dairy buildings of the loose-housing type with ground-level storage of feed and bedding, together with equipment for handling 20 to 30 cows, can be provided at about half the cost of conventional stall barns of the same capacity commonly found on dairy farms. A preliminary report (U.S.D.A. Marketing Research Report No. 64) covering a 3-year study of a group of farms in the St. Louis, Mo., milkshed points out that quality of milk once established at a high level by effective sanitation and cooling was not affected by development and use of these relatively low-cost buildings.

On some farms where buildings were remodeled, dairy chore labor was reduced to less than half that previously used. Also, only a little more than 500 pounds of bedding per cow was found necessary for satisfactory results on farms where hay feeding and shelter areas were separate. This low consumption of bedding made possible by properly arranged

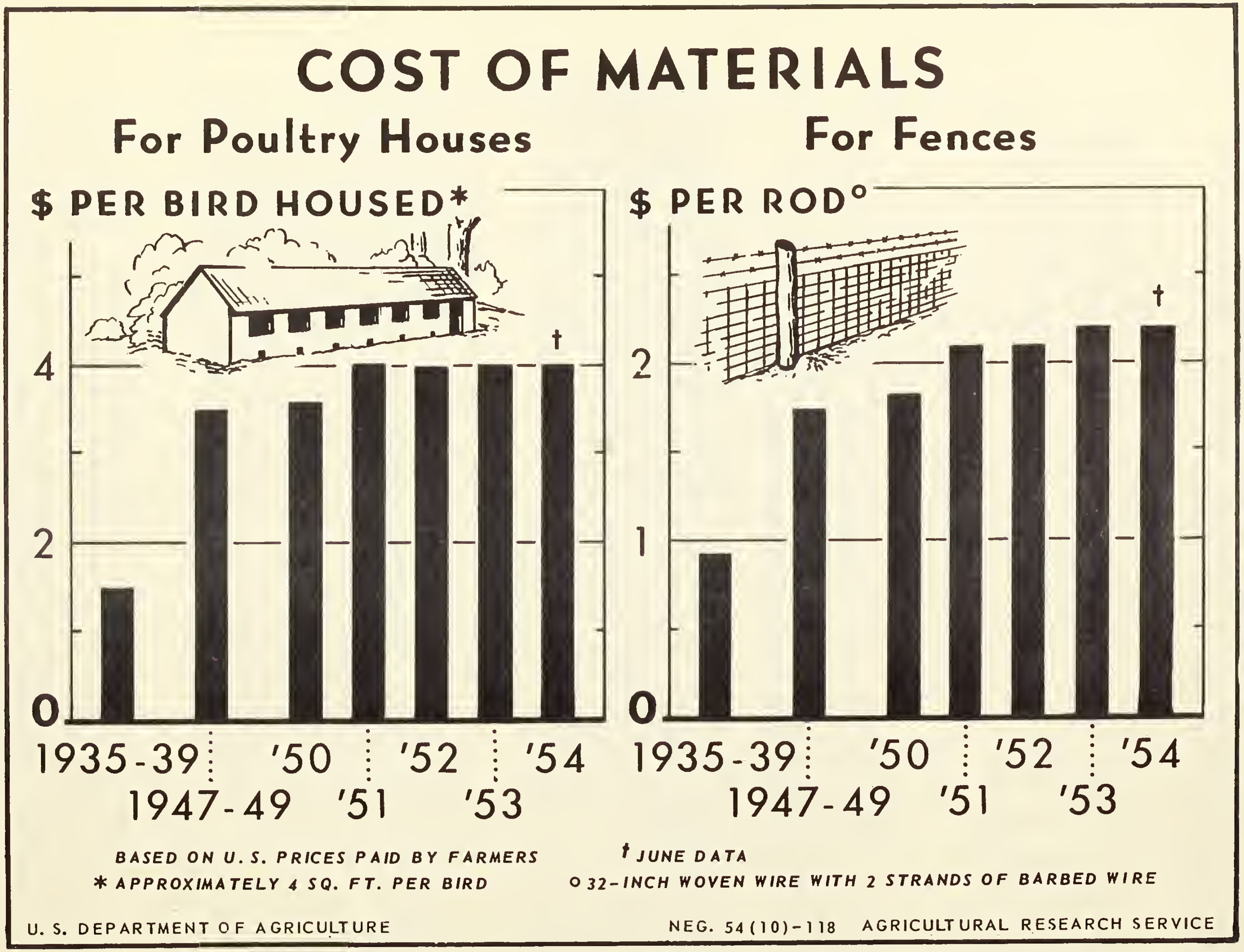
COST OF MATERIALS
For Poultry Houses
For Fences
$ PER BIRD HOUSED*
$ PER ROD°
0
2
4
0
1
2
†
†
1935-39
1947-49
'50
'51
'52
'53
'54
1935-39
1947-49
'50
'51
'52
'53
'54
BASED ON U. S. PRICES PAID BY FARMERS
* APPROXIMATELY 4 SQ. FT. PER BIRD
† JUNE DATA
° 32-INCH WOVEN WIRE WITH 2 STRANDS OF BARBED WIRE
U. S. DEPARTMENT OF AGRICULTURE
NEG. 54(10)-118 AGRICULTURAL RESEARCH SERVICE

Figure 5

loose-housing systems is of major importance in some areas. It permits use of low-cost dairy housing even where supplies of bedding materials are not plentiful.

The answer to the question of how to reduce costs on poultry farms where in the past operations were usually conducted in one-story buildings may differ somewhat from the answer suggested for dairy farms. In fact, it may be simpler to rebuild many dairy barns into efficient poultry houses than to make them over into efficient dairy barns. The efficiency of multiple-story poultry houses with elevators, automatic drinking fountains, and feed stored where it will run into hoppers by gravity has been demonstrated in many places. With such facilities, one man can handle about 5,000 layers with little help except perhaps when house cleaning is needed. House cleaning may need to be done only once a year.

Prices of fencing materials are expected to be about the same in 1955 as they have been since 1951. Many farmers have found that they can get along satisfactorily by using electric fences. In the past more expensive types were used. A few farmers are experimenting with keeping their cattle confined to relatively small areas during the pasture season and are hauling chopped green feed to them. This reduces the cost of fences but its effect on total costs has not been determined.

Prices of containers are also expected to be generally stable in the year ahead. Continued expansion of bulk handling of farm products, at least until after they have left the farm, appears to be in prospect. Bulk handling of milk from farms to dealers' plants is developing in many areas and some commercial feeds are now delivered to farmers in bulk. Another illustration is custom application of lime and fertilizer directly from bulk supplies. Changes such as these are made primarily to reduce handling and transportation costs but the saving in cost of containers is sometimes an additional consideration.

Pesticides

Prices of pesticides were mostly unchanged from 1953 to 1954 and no important changes are indicated for 1955. Manufacturers' prices of benzene hexachloride and DDT were slightly higher in September 1954 than a year earlier, but prices of 2,4-D and lindane were slightly lower. Prices of such staples as lead arsenate, copper sulphate, and sulphur remained unchanged. The number of chemicals for which the quoted price includes some or all of the transportation charges has increased from a year ago.

Incomplete information indicates that a total of about 260 million pounds of the major pesticides, excluding ground sulfur, were used in 1954 compared with about 210 million pounds in 1953. From 60 to 80 million pounds of copper sulfate, 60 to 70 million pounds of DDT, and 20 to 25 million pounds of 2,4-D are used each year. In addition, more than 25 million pounds of several established organic fungicides are used.

Agricultural pests (insects, diseases, and weeds) are destroying each year about one-fourth of this country's potential production from its croplands, ranges, and forests. 1/ In addition, other pests reduce livestock production about 7 percent below the level attainable if these losses were eliminated. Undoubtedly, it would not be economically feasible with present price and cost relationships nor does knowledge exist to eliminate these losses completely. But increased realization of these facts among the Nation's scientists and producers plus the development since World War II of scores of new pesticidal chemicals have been important factors in the growing demand for, and use of these materials.

Agricultural producers will benefit by keeping up-to-date on the development of new, effective pesticides. Many dairymen and livestockmen may find the new insecticides--malathion and diazinon--worth trying for flies which show resistance to DDT. Cotton, tobacco, and truck crop growers may want to test endrin against some of their specific insect problems. Helping to answer the weed problem are new urea and carbamate herbicides, as well as the older effective materials. Several good organic fungicides are now available to help prevent serious losses to plant diseases.

Land Costs and Rents

Prices of farmland have drifted moderately lower since the post-Korean peak in mid-1952. Most of the 7-percent decline since then occurred in the fall of 1953 when drought and lower prices for cattle reduced farm income in large areas of the country. Prices of land remained essentially unchanged in the first half of 1954 but further small declines are again likely in the drought areas during the last half of the year. Prices have been firm throughout most of the Corn Belt where good prices for hogs and more favorable returns from cattle feeding this last year have helped to sustain farm income. However, farm real estate activity has continued at a relatively low level in most areas.

Both present owners and prospective buyers are inclined to delay transactions until future levels of income and land prices become more apparent. As a result, the spread between asking and offering prices has widened in recent months and buyers have become more selective as to quality of land. The better farms are still bringing near peak prices, but substantial price concessions or particularly favorable terms of financing from the seller are necessary to move the lower grade farms. Farmers who seek additional land to add to their present farms are still active bidders in most areas, but demand from nonfarm investors has weakened.

The cost of using farmland in any given year may depend on whether the user is a cash renter, a share renter, or an owner-operator. The advantage sometimes lies with the cash renter, sometimes with the share renter, and sometimes with the owner-operator.

1/Agricultural Research Service, Losses in Agriculture, June 1954.

Although many nonmonetary considerations enter into the relative advantages of owning and renting land, it is possible to compare land costs under various rental arrangements with the capital charge for land derived from the mortgage interest rate. Over a period of years, the annual cost of land rented under a crop-share rental arrangement will generally exceed the capital charge for land because the landlord assumes part of the risks of price and weather. On cash-grain farms in east central Illinois, in 1951-53 for example, the net rent paid averaged more than 50 percent higher than the land charge based on the interest rate and current market value (table 9). On cotton farms in the Black Prairie of Texas, rents averaged about 30 percent higher.

Under a cash rental arrangement most of the risks of price changes and weather are carried by the renter. As a result, annual cost in relation to value of land rented more nearly approximates the mortgage rate of interest. However, cash rents are slow to respond to changes in land values and farm income. They tend to be low when the general trend is upward and relatively high during a downswing. Although cash rents can be adjusted more easily to changing income prospects than share rents, equitable methods for doing so have not been widely adopted. Data on cash rents paid for farmland in the North Central States are presented in tables 10 and 11.

Under a cropshare arrangement, rental shares are fixed largely by custom and change little from year to year but an increase in commodity prices is reflected immediately in the value of the crops paid as rent. Expenses for taxes and building maintenance that are normally paid by the landlord usually increase less rapidly so that the net share rent paid during such a period is frequently substantially higher than the land charge based on the mortgage rate of interest and the current value of land. When commodity prices and land values are stable or declining, land costs become adjusted more closely to the mortgage rate of interest with the difference arising largely from the difference in the amount of risk borne by the landlord and the renter.

Importance of the annual cost of capital invested in real estate is indicated by available data for average commercial family-operated farms in various parts of the country. 2/ These data show that the investment in land and buildings generally accounts for 50 to 75 percent of the total farm investment. Real estate represents the smallest proportion of the total investment for dairy and livestock farms and the largest for cash-grain and cotton farms. Marked changes in the relative importance of land and buildings in the total farm investment are also shown by these data. For most types of farms, investments in machinery, equipment, and livestock have increased more than has investment in real estate. As a result, the charge for land represents a smaller proportion of the total charge for all farm capital in recent years than before World War II. But, in some cotton areas where little progress has been made in mechanization and livestock numbers have not increased, the real estate component in total farm investment is about the same now as it was in 1937-41.

2/ Farm Costs and Returns, 1953. U.S. Dept. Agr. Agr. Info. Bull. 128.

Table 9.- Annual land cost: Estimated net rent and capital charge for farm real estate, selected types of farms 1/

Type of farm	1950	1951	1952	1953
	Dollars	Dollars	Dollars	Dollars
Cash grain (Illinois):				
Acres per farm	223	224	224	226
Total net rental cost	3,698	5,216	4,183	4,167
Capital charge for land	2,210	2,615	2,813	2,943
Net rent per acre	16.58	23.28	18.67	18.44
Ratio net rent to value (percent)	7.0	8.4	6.2	5.9
Cotton (Black Prairie, Texas)				
Acres per farm	161	163	165	167
Total net rental cost	1,040	951	1,262	1,450
Capital charge for land	715	867	977	1,038
Net rent per acre	6.46	5.83	7.65	8.68
Ratio net rent to value (percent)	6.7	5.2	6.1	6.6

1/ Typical rental rates and sharing of expenses for each type of farm were assumed to determine net rent. Capital charges were derived by applying prevailing mortgage rates of interest to estimated market values of land and buildings.

Table 10.- Gross cash rent per acre: Entire farms rented wholly for cash, and pastureland only, North Central States, 1951-54 1/

State	Entire farms				Pastureland only			
	1951	1952	1953	1954	1951	1952	1953	1954
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Ohio	8.10	9.30	9.30	9.70	5.10	5.70	5.30	6.50
Indiana	13.20	12.50	13.00	13.85	5.70	7.15	6.40	6.95
Illinois	13.30	14.70	15.10	15.90	6.90	7.10	7.40	7.65
Michigan	6.80	8.25	8.90	9.10	3.25	3.25	3.00	3.40
Wisconsin	9.80	10.40	11.20	10.80	3.95	4.40	4.40	4.50
Minnesota	8.05	8.65	9.30	9.45	4.50	4.70	4.90	5.10
Iowa	12.30	12.65	13.35	13.50	7.65	8.00	7.95	8.05
Missouri	6.70	6.80	6.80	6.70	3.85	4.50	4.50	4.20
North Dakota	2.35	2.80	2.75	3.00	1.00	1.00	1.10	1.20
South Dakota	3.50	4.40	4.20	4.10	1.50	1.70	1.75	1.80
Nebraska	6.60	6.00	5.40	5.90	3.20	3.50	3.75	3.65
Kansas	5.40	5.70	5.85	5.40	2.65	3.35	3.20	3.20

1/ Estimates supplied by crop reporters, as of April 1, for calendar year indicated.

Table 11.- Farmland rented for cash: Estimated value, net rent per acre and ratio of net rent to value, North Central States, 1954 with comparisons 1/

State and item	Average		1951	1952	1953	1954
	1937-41	1947-49				
Ohio:						
Value per acre......Dollars	62	132	157	172	167	187
Net rent per acre.....do.	2.54	4.70	5.12	5.82	5.82	5.86
Ratio rent to value.Percent	4.1	3.6	3.3	3.4	3.5	3.1
Indiana:						
Value per acre......Dollars	64	153	194	210	200	200
Net rent per acre.....do.	3.30	7.54	9.63	8.69	9.15	9.92
Ratio rent to value.Percent	5.2	4.9	5.0	4.1	4.6	5.0
Illinois:						
Value per acre......Dollars	99	196	265	273	274	287
Net rent per acre.....do.	3.95	7.45	8.59	9.70	9.73	10.28
Ratio rent to value.Percent	4.0	3.8	3.2	3.6	3.6	3.6
Michigan:						
Value per acre......Dollars	52	109	127	133	145	140
Net rent per acre.....do.	2.06	4.20	4.05	5.31	5.60	5.79
Ratio rent to value.Percent	4.0	3.8	3.2	4.0	3.9	4.1
Wisconsin:						
Value per acre......Dollars	60	106	131	136	134	123
Net rent per acre.....do.	2.09	4.73	5.78	6.07	6.74	6.35
Ratio rent to value.Percent	3.5	4.5	4.4	4.4	5.0	5.2
Minnesota:						
Value per acre......Dollars	54	97	125	138	137	136
Net rent per acre.....do.	2.36	3.86	5.00	5.15	5.61	5.65
Ratio rent to value.Percent	4.4	4.0	4.0	3.7	4.1	4.1
Iowa:						
Value per acre......Dollars	87	173	214	231	224	220
Net rent per acre.....do.	4.09	7.16	8.42	8.28	8.76	8.85
Ratio rent to value.Percent	4.7	4.1	3.9	3.6	3.9	4.0
Missouri:						
Value per acre......Dollars	38	73	91	101	96	98
Net rent per acre.....do.	2.09	4.05	5.40	5.24	5.25	5.05
Ratio rent to value.Percent	5.6	5.5	6.0	5.2	5.5	5.1
North Dakota:						
Value per acre......Dollars	12	26	35	37	38	39
Net rent per acre....,do.	.58	1.63	1.76	2.17	2.09	2.29
Ratio rent to value.Percent	4.7	6.2	5.0	5.8	5.5	5.8
South Dakota:						
Value per acre......Dollars	19	41	51	62	62	58
Net rent per acre.....do.	.88	1.92	2.64	3.26	3.03	2.90
Ratio rent to value.Percent	4.6	4.7	5.1	5.2	4.9	5.0
Nebraska:						
Value per acre......Dollars	37	70	106	101	96	97
Net rent per acre.....do.	1.65	3.38	5.15	4.62	3.86	4.28
Ratio rent to value.Percent	4.5	4.8	4.9	4.6	4.0	4.4
Kansas:						
Value per acre......Dollars	34	64	82	86	90	84
Net rent per acre.....do.	1.49	3.27	4.23	4.46	4.44	3.98
Ratio rent to value.Percent	4.4	5.1	5.1	5.2	4.9	4.7

1/ Derived from data supplied by crop reporters. Allowances for farm real estate taxes and building depreciation have been deducted from gross rent to obtain net rent.

The proportion of net farm income needed to pay for the use of farm real estate at prevailing interest rates varies considerably among the various types of farms and from year to year. In 1953, for example, it was less than 20 percent of net farm income on dairy farms, hog-dairy farms and cotton farms in the Mississippi Delta. It amounted to 50 percent or more on cattle and sheep ranches in the northern Plains and it was nearly as high on wheat-pea farms in the Pacific Northwest and on cotton farms in the southern Piedmont area.

Although the land charge tends to be relatively fixed from year to year there are indications that the proportion of total farm income that is allocated to land has declined in recent decades. This stems partly from the steady increase in non-real-estate capital but a similar increase has occurred also in the share of farm income that is allocated to labor and management. Increased use of mechanical equipment, fertilizer, improved crops and livestock, and production practices require more technical knowledge and management skill on the part of the farm operator. Higher wage rates generally and greater employment opportunities off the farm, together with the higher standard of living which farm families have achieved and wish to maintain have also raised the proportion of total farm income that can be claimed for labor and management.

Interest, Taxes, and Insurance

Non-Real-Estate Credit Costs - The total amount of interest paid for short-term, non-real-estate credit in 1954 will probably be 5 to 10 percent smaller than that paid in 1953. This results mainly from a decline in amount of credit used. Interest rates, which edged up in 1953, have stabilized or decreased slightly in 1954. For 1955, the outlook is for little further change--perhaps a slight decrease--in the amount and cost of non-real-estate credit. No substantial change in interest rates is expected.

These national changes lose some of their significance, however, because of the wide variation in interest costs among farmers. This variation among individuals is related both to amounts of credit used and to rate of interest charged. In attempting to reduce farm operating costs, it is desirable to obtain the lowest possible interest rate though not necessarily the smallest amount of credit.

With regard to the advisability of reducing or increasing the amount of non-real-estate credit no one answer is available for all farmers. Estimates of how much the proposed investments will increase income or reduce labor or other costs can be helpful in evaluating the desirability of borrowing money. Another factor to be considered, particularly in periods of uncertain price outlook, is the risk and consequences of inability to repay the expanded debt. The latter is particularly important when borrowing for consumption purposes. Only by weighing various factors relating to farm and financial management can a farmer decide the level of expenditures for credit that is justified.

For some farmers, obtaining a lower interest rate offers the greatest possibility of cutting interest costs. Costs of credit vary widely among lenders and creditors--from the relatively low charges of banks, production credit associations, and some individuals to the relatively high charges of some merchants, dealers, and personal finance companies. Many individuals who could qualify for loans from banks and production credit associations continue to borrow from high-cost creditors.

Borrowers sometimes do not know the rate of interest they are paying. The effective interest rate not only involves the stated rate and any fees or charges but also whether the rate applies to the full original amount of the loan or only to the balance of the loan as it is repaid. For instance, the effective rate on some so-called 6-percent amortized loans may be as much as 12 percent or more. Frequently a charge for credit at a high rate of interest, is hidden in the price of the goods bought.

Many times, even though the actual interest rate is known, a borrower does not realize the amount that could be saved by a rate that is 1 or 2 percent lower. For example, a farmer who finances a purchase of machinery with a $2,000 loan amortized over a 3-year period at an effective annual rate of 8 percent would save about $60 in interest cost if he could borrow the same amount at 6 percent. Cutting of interest costs is often as simple as doing a little figuring, and then shopping among lenders for the best terms.

Mortgage Interest Payments - Farm-mortgage (real estate) debt continues to increase in 1954 at about the same rate as in 1953. The total is expected to be about $8.2 billion on January 1, 1955, representing an increase of approximately 7 percent. Interest payable in 1955 on farm-mortgage debt may be around $405 million as compared with $380 million estimated for 1954.

Demand for farm-mortgage credit has continued strong this year. Although the volume of farm real estate sales is lower and farm real estate prices have declined, a larger proportion of farm real estate sales are credit-financed. On credit-financed sales the resulting farm-mortgage debt is a larger proportion of the sale price.

In view of the active competition now existing and in prospect for high-quality farm-mortgage loans, a farmer who tries to place a loan might save a considerable amount. Or he might obtain a loan better suited to his needs by shopping around and comparing rates, terms, and amounts offered by different lenders. Interest rates alone substantially affect the annual payment needed to service a loan. A 20-year $10,000 loan under the standard amortization plan requires an annual payment of about $800 at 5 percent interest, $770 at 4.5 percent interest, and $740 at 4 percent interest. Similarly, while the 20-year $10,000 loan at 5 percent requires an annual amortization payment of $800 the payment rises to $960 a year if the loan is written for only 15 years. The total amount of interest payable is, however, $1,600 more for the 20-year loan than for the 15-year loan. Often farmers find that lenders who offer the longest terms and the lowest interest rates are more conservative and may make smaller loans on any given farm. In such cases farmers who have found it necessary to borrow larger amounts on short-term mortgages at higher rates may find it desirable to refinance as soon as they have enough equity to make such refinancing possible.

Farmers continue to carry a volume of short-term non-real-estate debt which at the beginning of 1954 totaled about $7.0 billion (excluding Commodity Credit Corporation loans) and compares with a farm-mortgage debt of $7.7 billion. This large volume of short-term debt, while somewhat lower than in recent years, still appears to be fairly large compared with the longer term farm-mortgage debt. Many farmers prefer to keep their debts as much as possible on a non-real-estate basis instead of increasing their present mortgages or mortgaging farms now clear of real estate debt. However refinancing short-term debt with a real estate mortgage usually reduces a farmer's annual interest cost substantially--often as much as a third. Also it spreads out the repayment over a number of years. There appears to be little overall advantage in refinancing non-real-estate debt with short-term mortgage debt, but refinancing with long-term mortgages of around 20 years as soon as possible usually strengthens a farmer's financial position. Certainly, in instances where a substantial amount of non-real-estate farm debt has been incurred for such long-run purposes as stocking, equipping, and improving a farm, it should ordinarily be put on a long-run amortized basis as soon as possible.

Taxes - Preliminary indications are that State and local taxes on farm real estate are continuing to rise. Available figures do not show separately what local units of government which depend heavily upon property taxes are spending for goods and services. But purchases by State and local governments in the second quarter of 1954, according to Department of Commerce reports, continued their upward trend. They were up one-tenth from the rate a year ago and the increase was half again as large as that in the previous year. The increase is considerably above the postwar average. Proportionately, public expenditures are a more important part of all private and public expenditures than a year ago. School and highway construction are reported to be one-fifth higher than a year ago.

Farm real estate taxes, levied in 1954 and payable largely in 1955, are expected to rise about 5 percent. Higher real property levies are anticipated in all but a few States.

Taxes on the personal property of farmers probably will decline during the period. The rate of decline will approximate 3 percent, largely because of the decline in assessed value per head of livestock over the previous year. Livestock represents more than half of all personal property of farmers that reaches assessment rolls. Personal property in the aggregate is about one-fifth of all property, real and personal. Thus the total property tax bill of farmers probably will increase about 4 percent.

On a typical 160-acre hog-dairy farm in the Corn Belt, taxes on real estate payable in 1954 were $350. An increase to about $370 is expected for 1955. Personal property taxes levied in 1954, payable largely in 1955, are about $108. The latter represents a slight decrease from the amount that was payable on the same property a year earlier.

Many farmers may lower their Federal income-tax liabilities on 1954 income by taking advantage in their returns of several new provisions of law enacted this year. These include more liberal depreciation rates on certain farm assets like machinery, more generous deductions for soil and water conservation expenses, and a more liberal definition of dependency of children and other relatives. Larger deductions for medical expenses will be permitted. Also for some farmers there may be cuts in their taxes on retirement income and investment dividends, and more liberal tax credits for installment purchases.

Insurance - Assessments paid by farmers to farmers' mutual insurance companies which insure most farm property may increase about 5 or 10 percent in 1954. Farm mutual rates per $100 of insurance are kept relatively stable by withdrawals from, or additions to, safety funds in years of heavy or light losses, so that variations in insurance costs of farmers are affected primarily by changes in amounts of insurance they carry. Such changes are directly related to changes in property valuations (replacement costs), and policy renewal periods.

Insurance against fire (and lightning) damage on the buildings, machinery, livestock, and stored crops on representative commercial family operated farms of 19 types for which data are available would have cost about $37 per farm in 1953. This figure is based on the assumption of 75 percent coverage and a rate equal to the average of those charged by farm mutual insurance companies operating in areas in which the farms are located.

The value of this property dropped about 12 percent from 1952 to 1953 primarily because of reductions in unit values of livestock and stored crops. No significant changes have occurred since in property values, replacement costs, or insurance rates. Thus the insurance cost on these farms should be about the same ($37) in 1954 as in 1953. For farm mutuals in States in which these representative farms are located, the cost of insurance (losses plus expenses) averaged about 20 cents per $100 in 1953, compared with 23 cents for the United States as a whole.

Mainly because of drought, but also because of serious rust damage on durum wheat, Federal all-risk crop insurance indemnities paid to farmers in 1954 will exceed premiums collected by $5 to $10 million. Farmers carried more hail insurance against crop damage in 1954 than in any previous year and the loss rate was considerably above average.

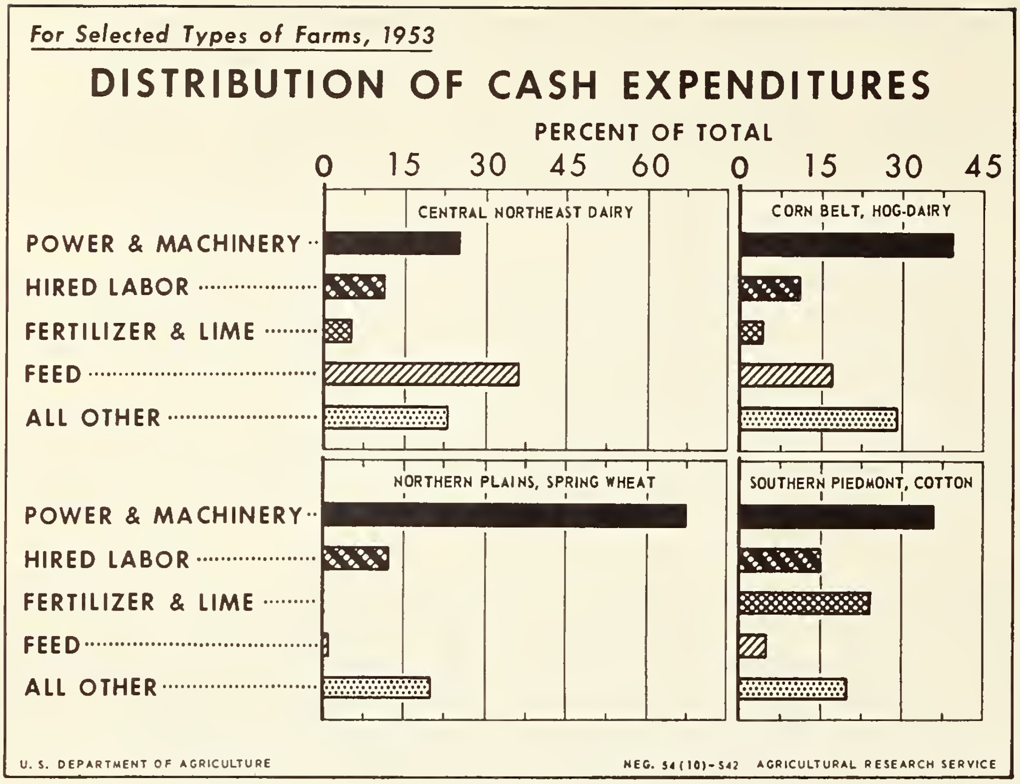

Figure 6

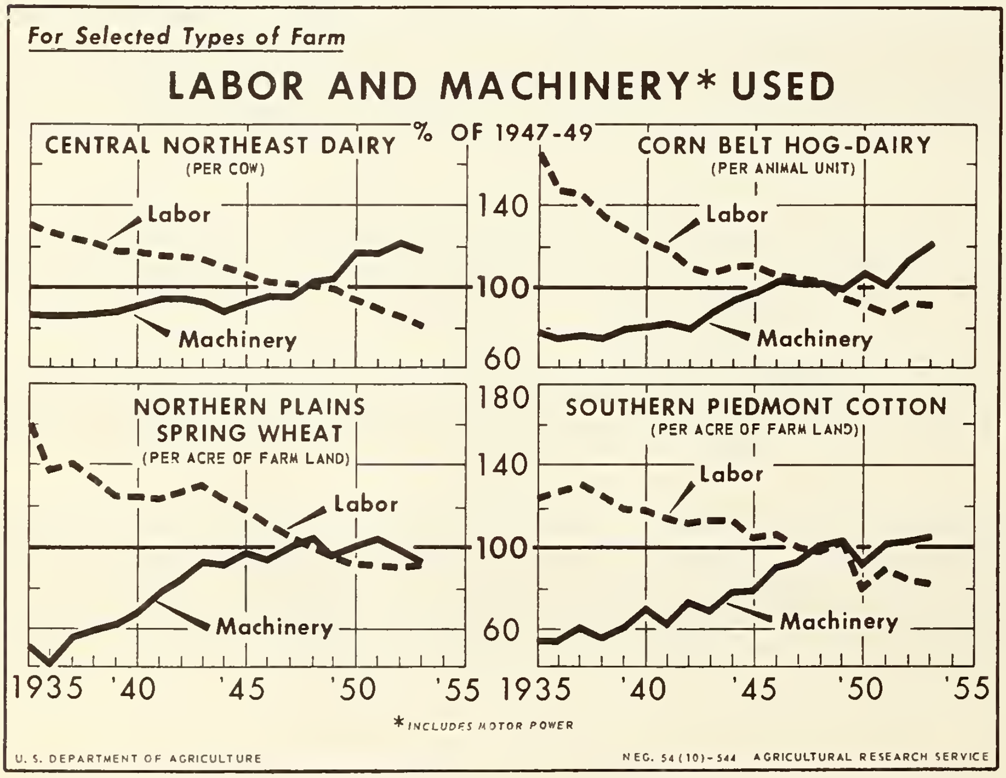

Figure 7

Cost Situation on Selected Types of Farms

Farmers are becoming increasingly dependent upon manufactured equipment and supplies in their farming operations. Machinery, motor supplies, fertilizer, spray materials, and electricity are among the things that farmers now use in larger quantities. In 1937-41 such inputs represented from 18 to 33 percent of total farm costs for the 5 types of farms illustrated in figure 3, page 8. By 1950-53 these inputs had become more important and comprised from 21 to 43 percent of total inputs.

Items used in production that are largely farm-produced, such as livestock, feed and seed, increased also, but the combined increase in these inputs was more than offset by a decrease in hired labor. As a result, the ratio of all purchased inputs plus hired labor to total inputs has increased only slightly on most farms. It has actually decreased on cotton farms in the southern Piedmont. The third group of inputs consists of operator and family labor and management and land.

Year-to-year variations in prices of inputs from nonfarm sources are small. Prices of farm-produced items and hired labor are more flexible. They usually vary with prices received by farmers. Thus, with a continued increase in the proportion of inputs from nonfarm sources, the structure of total farm operating costs becomes more rigid.

In 1950-53 inputs from nonfarm sources other than hired labor made up 43 percent of total inputs on wheat farms in the northern Plains and on cotton farms in the southern Piedmont. These two types of farms also are among those for which the increase from 1937-41 to1950-53 in the proportion of nonfarm inputs was greatest. Although the rate of increase may have slowed up somewhat, there is no indication that it has stopped. Factory-produced items are expected to play an even more important role in farming operations in the future if cost-rate relationships remain as they are.

Although purchased inputs usually comprise from one-half to two-thirds of the total, their composition varies considerably. Figure 6 shows the relative importance of major classes of expenditures on 4 types of farms. Expenditures for power and machinery are important items of cost on all 4 types (table 12). On dairy farms feed purchases are most important, but hired labor is also a substantial item. These are also important cost items on hog-dairy farms. On cotton farms, expenditures for fertilizer and hired labor together are as important as those for machinery. The importance of each class of expenditures varies from one type of farm to another. Distribution of these expenditures on 19 types of farms is shown in table 13.

The farm cost situation on selected types of farms serves to illustrate the varying nature of farm costs. The four types of farms for which preliminary estimates are available for 1954 are presented to illustrate the effects of changes in costs and incomes on different types

Table 12.- Cash expenditures on selected types of farms, 1953

Items	Dairy farms, central Northeast	Hog-dairy farms, Corn Belt	Cotton farms, southern Piedmont	Wheat-small grain-livestock farms, northern Plains
	Dollars	Dollars	Dollars	Dollars
Total cash expenditures	5,960	5,999	1,945	5,163
Feed purchased	2,140	1,042	111	52
Livestock purchased	84	62	40	23
Other livestock expense	188	185	9	58
Fertilizer and lime	276	269	469	0
Other crop expense	275	310	1/ 184	180
Machinery purchased	550	1,074	190	1,142
Other machinery expenses	918	1,239	437	2,293
Farm buildings and fences	300	575	130	268
Labor hired	686	645	2/ 290	624
Taxes	388	453	59	482
Other	155	145	26	41

1/ Includes $49 for insecticides and $64 for ginning.
2/ Includes cropper labor.

of farms. They do not represent a cross section of United States agriculture. Realized net farm income in 1954 of all farm operators in the United States, for example, is down about 6 percent relative to 1953, but special conditions on three of the selected farms resulted in somewhat more than a 6-percent decline in net farm income. The situation on these farms does serve to illustrate important aspects of costs which farmers in various parts of the country will want to consider in planning for 1954.

Dairy Farms - Central Northeast

In 1954, net farm incomes on dairy farms in the Northeast probably will be nearly 20 percent less than in 1953 (table 14). This reflects a slight increase in certain costs--mainly increased quantities of purchased feed--and reductions in prices received for milk and poultry products. Although prices paid for feed declined, more feed was purchased because of an increase in the number of cows.

Table 13.- Distribution of cash farm expenditures, selected types of commercial family-operated farms, 1953

Type of farm and location	Power and 1/ machinery	Hired labor 2/	Fertilizer and lime	Feed 3/	Live-stock	Buildings and fences	Taxes	Other
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Dairy farms:								
Central Northeast	25	11	5	36	1	5	7	10
Eastern Wisconsin	47	8	3	14	1	9	7	11
Western Wisconsin	45	7	4	14	1	10	9	10
Corn Belt farms:								
Hog-dairy	39	11	4	17	1	10	7	11
Hog-beef raising	40	9	7	17	1	8	9	9
Hog-beef fattening	24	5	2	14	37	6	6	6
Cash grain	44	6	10	7	1	9	14	9
Tobacco-livestock farms:								
Kentucky Bluegrass	28	25	13	6	1	8	10	9
Cotton farms:								
Southern Piedmont	36	15	24	5	2	7	3	8
Delta of Mississippi	37	36	6	---	1	3	9	8
Black Prairie, Texas	43	39	1	4	---	4	2	7
High Plains, Texas (nonirrigated) 4/	62	19	---	5	---	2	4	8
High Plains, Texas (irrigated)	60	31	---	2	---	2	2	3
Spring wheat farms (No. Plains):								
Wheat-small grain-livestock	67	12	---	1	1	5	9	5
Wheat-corn-livestock	55	8	---	5	2	5	17	8
Winter wheat farms:								
Wheat-pea (Washington and Idaho)	57	15	8	4	---	5	8	3
Sheep ranches:								
Northern Plains	18	26	---	20	13	3	10	10
Cattle ranches:								
Northern Plains	41	13	---	8	7	5	14	12
Intermountain region	33	14	---	7	15	4	22	5

1/ Including ginning, hauling and other machine work hired.
2/ Including payments to croppers.
3/ Including cost of grazing permits.
4/ Data are for 1952.

Table 14.- Gross farm income, operating expense and net farm income, selected types of farms, 1953 and expected changes for 1954

Type of farm	Unit	1953	Percentage change from 1953 to 1954 1/
Dairy farms, Central Northeast:			
Gross farm income	Dollar	9,270	-6
Operating expense	do.	5,955	2
Net farm income	do.	3,315	-19
Cows, 2 years old and over	Number	23.4	6
Hog-dairy farms, Corn Belt:			
Gross farm income	Dollar	11,794	-3
Operating expense	do.	5,899	2
Net farm income	do.	5,895	-8
Pork produced	100 pounds	233.3	3
Cotton farms, Southern Piedmont:			
Gross farm income	Dollar	3,287	-21
Operating expense	do.	2,025	-16
Net farm income	do.	1,262	-28
Cotton	Acre	15.8	-23
Other crops	do.	37.2	1
Wheat-small grain-livestock farms, Northern Plains:			
Gross farm income	Dollar	9,047	-3
Operating expense	do.	5,267	-2
Net farm income	do.	3,780	-6
Wheat	Acre	213.2	-19
Other crops	do.	208.0	21
Fallow land	do.	112.1	3

1/ Tentative estimates.

Dairy farmers are always looking for opportunities to reduce costs and improve net incomes, particularly at times like these when prices of milk have declined without corresponding declines in prices of cost items. Such a price-cost squeeze on northeastern dairy farmers has been under way during the last 2 years. It has meant a lower net income for the average producer. But some farmers have been able to reduce their costs and thereby maintain their incomes at a relatively high level. They have done this by making wider use of improved technology in breeding, feeding, labor utilization, and other aspects of dairy farm management. This has meant cows capable of producing more milk. It has meant improvement in forage production and harvesting to provide more and better roughage. It has meant greater use of labor-saving equipment and techniques to allow the labor force to operate more efficiently (fig. 7). In most cases the result has been more milk per farm and per hour of man labor.

These same adjustments appear to offer the main hope for reducing costs and for maintaining or improving net incomes on dairy farms in the Northeast in 1955 and the years beyond. Many farmers have not yet made full use of available technical knowledge; they can make further adjustments over the years to improve production efficiency. The result will usually be more milk on the farm in question, but this may be partially offset by reductions on other farms whose operators find better opportunities in other farm enterprises or in off-farm employment.

Hog-Dairy Farms, Corn Belt

Net farm incomes in 1954 apparently will be about 8 percent lower than in 1953 on hog-dairy farms in northeastern Iowa and adjacent parts of Illinois and Wisconsin but farm incomes in this area will still be at a relatively high level. Farmers in this area have had good weather in recent years and total farm production has been well above the 1947-49 average.

Many of the opportunities for reducing costs on these hog-dairy farms are similar to those mentioned above for dairy farms in the Northeast. Ways of reducing costs of producing hogs include: (1) Farrowing practices that will save a high percentage of the pigs born, and (2) feeding practices that will supply adequate proteins, vitamins, and minerals to pigs, especially from the time they are weaned until they weigh 100 pounds. Recent developments in the use of antibiotics in feeds are important from the standpoint of low-cost hog production.

Cotton Farms - Southern Piedmont

If the price of cotton for 1954 is the same as the average for the first 9 months of this year, net farm incomes on southern Piedmont cotton farms will probably average about $900, or nearly 30 percent below

1953. Gross farm incomes will be down 20 percent while farm expenses will be down only 15 percent. Price-cost relationships are only slightly less favorable. Most of the reduction is due to a smaller volume produced. Lower production results from smaller acreages of cotton and lower yields. Unfavorable weather caused lower yields for all major crops. Much of the land taken out of cotton remained idle.

Farm operating costs declined largely because of the lower acreage and yield of cotton. But the decline in costs was considerably less than the decline in income. Important costs such as machinery depreciation are relatively fixed.

Since 1940 most of the increase in net farm incomes on these farms has resulted from higher prices and more favorable price-cost-relationships. Greater physical efficiency has made a small contribution to higher net farm incomes. If present price-cost relationships prevail for the next few years, any improvement in net farm incomes must come largely from greater physical efficiency including such things as better use of land and increase in size of farm. More complete utilization of land taken out of cotton offers some opportunity to improve efficiency over 1954. Oats were the main crop grown in place of cotton this year. In the long run the addition of a supplementary beef-cattle enterprise would probably improve the efficiency of many of the larger cotton farms.

Factors that contribute to higher yields per acre such as higher fertilization, better land selection, improved insect control, better cultural practices, and better varieties have contributed most to improved physical efficiency. Considerable opportunity remains for improvement along this line. Some additional farms may shift from mule to tractor power. Larger farms have some possibilities for reducing costs through the use of more anhydrous ammonia, herbicides, and mechanical choppers, and pickers or strippers. A larger volume of output per worker is of primary importance in the longer run.

Wheat-Small Grain-Livestock Farms

Net farm incomes on wheat-small grain-livestock farms in the northern Plains are expected to average about $3,550 in 1954, or about 5 percent below 1953. Unusually low yields were a major factor in the reduction in income in 1954. Crop yields will probably average about 8 to 10 percent below 1953, and 20 to 25 percent below the most recent 10-year average. Most of the decline in crop yields is due to rust damage on wheat. Livestock production on these farms is expected to be higher in 1954 than in 1953 and at about the highest level since 1944.

Prices received by wheat-small grain-livestock farmers in 1954 are expected to average about 5 percent below 1953, while prices paid will remain about the same. Reduction in farm expenses arise primarily from reduced crop and machinery operating expense. But the decline in these costs was less than the decline in farm income.

Opportunities for reducing costs on existing wheat farms of this type are perhaps fewer than on many other types of farms. As pointed out earlier a high proportion of the inputs used on these farms are obtained from nonfarm sources. This makes the cost structure on these farms fairly rigid. Farmers who contemplate the purchase of new machinery during the next year would do well to consider the effects of such purchases on costs and net income. Costs of gas, oil, and tires and other machinery-operating expenses are also a large part of total farm expenses; they may offer some opportunity for cost reduction. For example, the costs of operating automobiles and trucks on farms with about equal volumes of production vary greatly.

Unless total costs can be reduced, maintaining a large volume of production will be essential if unit costs are to be held down. Assuming that wheat farmers will comply with a further cut in acreage of wheat in 1955, the problem of maintaining this high volume of production becomes more acute. Each farmer must arrive at the combination of fallow land and crops other than wheat that will provide the largest sustained net income. If the increase in yields of barley, oats, and flax following fallow are as great as the increase in yields of wheat (or even slightly less), it may pay to increase the acreage of fallow in 1955 to obtain larger production of these crops in later years.

Looking further into the future wheat farmers may be able to reduce costs by increasing the size of their farms and by using their land resources more extensively. Current studies indicate that the demand for wheat probably will not change appreciably in the foreseeable future, but demand for cattle is likely to increase considerably. A shift to more livestock will enable these farmers to utilize their labor more fully. Much of the labor used on these farms now is concentrated in relatively short seasons of planting and harvest.

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